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November 8, 2010

Total Number of Pages
(including cover letter): 14 Pages

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Serial No.: 10/802,239

Telephone Interview: Wednesday, November 10, 2010 at 2:00 PM

Docket No.: 13768.1375

Customer No.: 47973

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PATENT APPLICATION

Docket No. 13768.1375

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Alex A. Kipman

Serial No.:

10/802,239

) Art Unit

) 2192

Filed:

March 17, 2004

Conf. No.:

5256

For:

ARCHITECTURE THAT RESTRICTS
PERMISSIONS GRANTED TO A BUILD
PROCESS

Examiner:

Zheng Wei

Customer No.:

47973

AMENDMENT "G" AND RESPONSE AFTER NON-FINAL

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Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In response to the Office action mailed June 18, 2010 (paper no. 20100607), please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper;

Remarks/Arguments begin on page 10 of this paper.

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Reply to Non-Final Office Action mailed June 18, 2010

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A system that facilitates management of a build process, comprising:

a build process processor that executes to build a project that includes ~~one or more~~ a plurality of build entities, wherein building the project includes compiling at least one of the ~~one or more~~ a plurality of build entities, the build entities including one or more project files, operating system account information, and one or more assemblies; and

a policy component that is accessed by the build process processor before building the project to determine a level of trust within which the build process executes, wherein the policy component specifies a level of trust for each build entity involved in the build process;

wherein the level of trust within which the build process executes is determined by analyzing the levels of trust associated with each of the ~~one or more~~ a plurality of build entities, and selecting the lowest level of trust of all involved build entities,

wherein the levels of trust include:

- (i) levels that are representative of trusted, which has no restrictions on the build process,
- (ii) semi-trusted, which has restrictions on the build process, the restrictions including preventing the build process from accessing the registry and from having TCP/IP access, and
- (iii) untrusted, which causes the build process to fail,

wherein if the lowest level of trust is untrusted and the build process fails, the developer is notified.

2. (Canceled)

3. (Previously Presented) The system of claim 1, wherein the policy component includes one or more policy files that define the levels of trust for the build entities.

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4. (Canceled)

5. (Currently Amended) The system of claim 1, wherein the one or more build entities assemblies include one or more of a project file, a task, or a logger, ~~and operating system (OS) account information.~~

6. (Previously Presented) The system of claim 3, wherein the policy files include a user defined policy file and a default policy file.

7. (Canceled)

8. (Previously Presented) The system of claim 1, wherein the associated level of trust of a build entity is determined by a location where the build entity is stored.

9. (Previously Presented) The system of claim 1, wherein if a build entity is not associated with a level of trust, the assigned level of trust for the build process is untrusted.

10. (Previously Presented) The system of claim 1, wherein at least one of the build entities is received at least by one of downloading from a website, as part of an e-mail, or from a version control system.

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11. (Currently Amended) A system that facilitates management of a build process, comprising:

a build process processor that executes to build a project that includes ~~one or more~~ plurality of build entities, wherein building the project includes compiling at least one of the ~~one or more~~ plurality of build entities, the build entities including one or more project files, operating system account information, and one or more assemblies; and

one or more policy files that are accessed by the build process processor before building the project to determine a permission level within which the build process executes, wherein the one or more policy files specify a level of trust for each of the plurality of build entities involved in the build process;

wherein the permission level within which the build process executes is determined by analyzing the levels of trust associated with each of the ~~one or more~~ plurality of build entities, and selecting the lowest level of trust of all involved build entities,

wherein the levels of trust include:

- (i) levels that are representative of trusted, which has no restrictions on the build process,
- (ii) semi-trusted, which has restrictions on the build process, the restrictions including preventing the build process from accessing the registry and from having TCP/IP access, and
- (iii) untrusted, which causes the build process to fail,

wherein if the lowest level of trust is untrusted and the build process fails, the developer is notified.

12. (Canceled)

13. (Previously Presented) The system of claim 11, wherein the policy files assign a level of trust to a build entity by grouping storage locations that commonly store build entities and assigning a level of trust to the groupings such that if a build entity is stored in a location that is part of a certain group, the build entity is assigned the level of trust assigned to that certain group.

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14. (Previously Presented) The system of claim 13, wherein if a build entity is stored in a location that is not included in any of the groupings in any of the policy files, the build entity is untrusted such that the build process executes under a permission level of untrusted.

15. (Currently Amended) The system of claim 11, wherein the one or more build ~~entities/assemblies~~ include one or more of ~~a project file, a task, or a logger, and operating system (OS) account information.~~

16. (Previously Presented) The system of claim 11, wherein the one or more policy files include a user defined policy file that defines a new permission level under which the build process may execute.

17. (Canceled)

18. (Previously Presented) The system of claim 11, wherein the one or more policy files are written in XML.

19. (Previously Presented) The system of claim 11, wherein the one or more policy files are adjusted automatically according to one or more parameters.

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20. (Currently Amended) A computer storage medium having computer-executable instructions for performing a method for managing a build process, the method comprising:

receiving a command to build a project that includes ~~one or more~~a plurality of build entities, the build entities including one or more project files, operating system account information, and one or more assemblies;

accessing one or more policy files to determine a level of trust for each of the ~~one or more~~plurality of build entities, wherein the one or more policy files specify a level of trust for each of the plurality of build entities involved in the build process, wherein the levels of trust include:

(i) a trusted level that places no restrictions on the build process,,

(ii) a semi-trusted level that places restrictions on the build process, but still allows the build process to execute, the restrictions including preventing the build process from accessing the registry and from having TCP/IP access,, and

(iii) an untrusted level that causes the build process to abort;

determining the level of trust under which the build process executes by determining the lowest level of trust that is assigned to a build entity in the project; and

executing the build process with the determined level of trust, if the level of trust is trusted or semi-trusted, or failing the build process if the level of trust is untrusted.

21. (Canceled)

22. (Previously Presented) The computer storage medium of claim 20, further comprising sending a message when the build process fails.

23. (Previously Presented) The computer storage medium of claim 20, further comprising receiving input from a developer that defines criteria to be included in the one or more policy files to define how a level of trust is assigned to a build entity.

24. (Previously Presented) The computer storage medium of claim 23, wherein the criteria includes a location where a build entity is stored, or the user who is logged into the system.

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25. (Previously Presented) The computer storage medium of claim 20, further comprising determining that the one or more policy files does not contain criteria that define a level of trust for one of the build entities in the project, and assigning an untrusted level of trust to the build entity.

26. (Currently Amended) The computer storage medium of claim 20, wherein one of the ~~one or more~~plurality of build entities is associated with at least two levels of trust.

27. (Canceled)

28. (Previously Presented) The computer storage medium of claim 20, wherein the one or more policy files includes a default policy file and a user-defined policy file.

29. (Previously Presented) The computer storage medium of claim 28, wherein the user-defined policy file overrides the default file when a conflict occurs.

30. (Previously Presented) The computer storage medium of claim 20, wherein at least one of the one or more policy files is stored with access restrictions.

31-36. (Canceled)

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37. (Currently Amended) A method performed by a processor of a computer system for specifying a level of trust under which a build process is executed in an integrated development environment, the method comprising:

receiving, by a processor that executes code for the integrated development environment, a command to build a project that includes one or more a plurality of build entities, the build entities including one or more project files, operating system account information, and one or more assemblies;

accessing one or more policy files to determine a level of trust for each of the one or more plurality of build entities, wherein the one or more policy files specify a level of trust for each of the plurality of build entities involved in the build process, wherein the levels of trust include:

- (i) a trusted level that places no restrictions on the build process,,
- (ii) a semi-trusted level that places restrictions on the build process, but still allows the build process to execute, the restrictions including preventing the build process from accessing the registry and from having TCP/IP access, and
- (iii) an untrusted level that causes the build process to abort;

determining the level of trust under which the build process executes by determining the lowest level of trust that is assigned to a build entity in the project; and

executing the build process with the determined level of trust, if the level of trust is trusted or semi-trusted, or failing the build process if the level of trust is untrusted.

38. (Previously Presented) The method of claim 37, further comprising sending a message when the build process fails.

39. (Previously Presented) The method of claim 37, further comprising receiving input from a developer that defines criteria to be included in the one or more policy files to define how a level of trust is assigned to a build entity.

40. (Previously Presented) The method of claim 39, wherein the criteria includes a location where a build entity is stored, or the user who is logged into the system.

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41. (Previously Presented) The method of claim 37, further comprising determining that the one or more policy files does not contain criteria that define a level of trust for one of the build entities in the project, and assigning an untrusted level of trust to the build entity.

42. (Previously Presented) The method of claim 37, wherein one of the one or more build entities is associated with at least two levels of trust.

43. (Previously Presented) The method of claim 37, wherein the one or more policy files includes a default policy file and a user-defined policy file.

44. (Previously Presented) The method of claim 43, wherein the user-defined policy file overrides the default file when a conflict occurs.

45. (Previously Presented) The method of claim 37, wherein at least one of the one or more policy files is stored with access restrictions.

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REMARKS

The Office Action mailed June 18, 2010, considered and rejected claims 1, 3, 5, 6, 8-16, 18-20, 22-26, 28-30 and 37-45. Claims 1, 3, 5-6, 8-16, 18-20, 22-30 and 37-45 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Cymerman* (Automate your build process using Java and Ant) in view of *Jerger* (U.S. Patent No. 6,321,334) in view of *Vasilik et al.* (U.S. Publ. No. 2003/0163799).

By this response, each of the independent claims has been amended to clarify the invention to distinguish from how the examiner is interpreting the art. These amendments include specifying that a plurality of build entities are involved in the build process and defining the specific types of build entities that are involved including project files, operating system account information, and assemblies. It is noted that similar limitations were in claim 5 and 15 which the examiner has failed to address. The examiner's rejection simply states that claims 1, 3, 5, 6, and 8-19 are all the same as claims 37-45. This is not true. In particular, claims 5, 12, 13, and 15 contain (or contained) limitations that did not appear in any of claims 37-45.

The independent claims also have been amended to better clarify that a level of trust is associated with each individual build entity involved in the build process. In the examiner's rejections, he is equating this aspect with including/excluding entities from a build. *See, e.g.* OA, pg. 8, 3rd and 4th bullets. This, however, is not how the invention works or how the claim is worded. The role of the level of trust is not to determine which build entities are included in the build process, but to determine what permissions the build process will have. The build entity with the lowest level of trust dictates the permissions that the build process will have. This aspect is also further clarified by the added limitation that a semi-trusted level restricts the build process from accessing the registry and from having TCP/IP access.

Applicant submits that the examiner's arguments on page 8 clearly illustrate the examiner's fundamental misunderstanding or misinterpretation of the claims. As has been argued, the Ant tool does not in any way dictate a security level under which the actual building of a project will occur. Applicant agrees with the examiner that Ant allows the developer to specify which files are to be included/excluded in the build. However, this is not relevant to the invention. The entities involved in the build process in the present invention are already known before the steps of the claim are carried out. The claim details the process of determining what the level of trust is for each of the build entities and then uses the lowest level of trust for the

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build process. No entities will be excluded from the build process based on this determination of the level of trust for each entity. This process of restricting the build process is known as "sandboxing." There is nothing in Ant similar to this.

Further, the other references likewise do not disclose this type of "sandboxing" of the build process. The newly cited Vasilik reference only discloses that different source files can be prioritized so that the highest priority source file is used to compile an application. A good summary of this process is provided in claim 1. Nothing in Vasilik, however, relates to restricting the permissions of the build process. Therefore, Vasilik, when combined with Ant, fails to teach or suggest each limitation of the claims.

Finally, Jerger has already been addressed and is not being cited to reject the key features of the claim. Therefore, Applicant submits that the combination of cited art fails to teach or suggest each limitation of the independent claims.

To summarize, the examiner's arguments incorrectly address the independent claims as being directed to determining which files are included in a build. The invention, in contrast, is directed to determining what permissions the build process will have based on which files are included. It should be apparent that these two are different. Accordingly, Applicant resubmits each of the arguments that were made in the previous responses which address how Ant (as well as the other references) is not relevant to determining the permissions of the build process.

Lastly, the office action has not addressed each of the claims. Some of the limitations from the claims that were not addressed now appear in the independent claims (e.g. claims 5 and 12). Applicant respectfully requests that each of the different claims be addressed (in particular claim 13).

For each of the above reasons, as well as those that were presented in the previous responses, Applicant submits that the claims are novel and non-obvious in view of the cited art and respectfully requests that the rejections be withdrawn. Specifically, the combination of art fails to teach or suggest each of the limitations including:

a build process processor that executes to build a project that includes a plurality of build entities, wherein building the project includes compiling at least one of the plurality of build entities, the build entities including one or more project files, operating system account information, and one or more assemblies;
and

a policy component that is accessed by the build process processor before building the project to determine a level of trust within which the build process

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executes, wherein the policy component specifies a level of trust for each build entity involved in the build process;

wherein the level of trust within which the build process executes is determined by analyzing the levels of trust associated with each of the plurality of build entities, and selecting the lowest level of trust of all involved build entities,

wherein the levels of trust include:

(i) levels that are representative of trusted, which has no restrictions on the build process,

(ii) semi-trusted, which has restrictions on the build process, the restrictions including preventing the build process from accessing the registry and from having TCP/IP access, and

(iii) untrusted, which causes the build process to fail,

wherein if the lowest level of trust is untrusted and the build process fails, the developer is notified;

as claimed in claim 1, and similarly claimed in the other independent claims.

In view of the foregoing, Applicant respectfully submits that the other rejections to the claims are now moot and do not, therefore, need to be addressed individually at this time. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at (801) 322-8427.

The Commissioner is hereby authorized to charge payment of any of the following fees that may be applicable to this communication, or credit any overpayment, to Deposit Account No. 23-3178: (1) any filing fees required under 37 CFR § 1.16; and/or (2) any patent application and reexamination processing fees under 37 CFR § 1.17; and/or (3) any post issuance fees under 37 CFR § 1.20. In addition, if any additional extension of time is required, which has not otherwise been requested, please consider this a petition therefore and charge any additional fees that may be required to Deposit Account No. 23-3178.

Dated this ____ day of ____, 2010.

Respectfully submitted,

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